

ABSTRACT

A fluid measurement system includes a long focus optical system at a CCD camera, and an image processing means for comparing particle images taken at two time points for analysis. The system further includes a high-pass filter for leaving high frequency components at a predetermined frequency and higher from the luminance signal of the image, so that a turbulence structure occurring in the fluid to be measured is extracted, and the turbulence structure is captured and its image is taken. Therefore, the flow field of an inaccessible fluid to be measured can be analyzed.